

Contributors to This Issue

J. E. DAVID BATSON, JR., Sc.B., 1961, Brown University; M.S., 1971, Northeastern University; U. S. Navy, 1961-1967; Western Electric Company, 1967—. With the Navy, Mr. Batson was a carrier-based jet fighter pilot and flight instructor. At Western Electric, he worked on digital multiplex test development and many phases of D2 Channel Bank development and manufacturing. He is presently Project Coordinator for the Millimeter Waveguide project.

STEPHEN D. BLOOM, RCA Institutes, Inc., 1960; Bell Laboratories, 1960—. Since joining Bell Laboratories, Mr. Bloom has been engaged in the design and development of electronic power systems. Recently he has concentrated in the design of pulse-width-modulated-type converters and integrated-circuit-type series regulators.

ROBERT W. CHANG, B.S.E.E., 1955, National Taiwan University; M.S.E.E., 1960, North Carolina State University; Ph.D., 1965, Purdue University; Bendix Corporation, 1960-1963; Bell Laboratories, 1965—. Mr. Chang has worked on a variety of problems in data transmission and communication system theory. Member, Phi Kappa Phi, Eta Kappa Nu, Sigma Xi, IEEE.

ANTHONY J. CIRILLO, B.E.E., 1962, Manhattan College; S.M., 1963, Massachusetts Institute of Technology; Bell Laboratories, 1962—. Mr. Cirillo's initial work was on high-speed solid-state coders for pulse-code-modulation transmission systems. He also worked on timing and framing circuitry for the D2 Channel Bank. At present, he is involved in circuit and software development for the Voiceband Interface Frame which is part of the No. 4 ESS Toll Switching project. Member, Eta Kappa Nu, Tau Beta Pi.

CARL L. DAMMANN, B.S.E.E., 1961, University of Maryland; M.E.E., 1963, New York University; Bell Laboratories 1961—. Mr. Dammann has been engaged in development of PCM Terminal equipment. He is now Supervisor of the Coding Group. Member, IEEE.

M. EISENBERG, B.S. (E.E.), 1964, M.S. (E.E.), 1964, Ph.D. (E.E.), 1967, Massachusetts Institute of Technology; Bell Laboratories, 1967—. Mr. Eisenberg has worked on several problems in the fields of queuing theory, network management, and network design. He has also done research on certain aspects of communications theory. Member, Operations Research Society of America, Association for Computing Machinery, Sigma Xi, Tau Beta Pi, Eta Kappa Nu.

D. GLOGE, Dipl. Ing., 1961, Dr. Ing., 1964, Technical University of Braunschweig, Germany; Bell Laboratories, 1965—. Mr. Glöge's work has included the design and field testing of various optical transmission media and the application of ultra-fast measuring techniques to optical component studies. He is presently engaged in transmission research related to optical fiber communication systems.

KENNETH A. GLUCKOW, Electronics Eng. Cert., 1957, RCA Institutes; Newark College of Engineering, 1957-62; Bell Laboratories 1957—. Mr. Gluckow initially worked in the Bell System Repair Specification organization, preparing repair requirements and repair studies for transmission products. Since 1962, he has been involved with reliability studies for transmission products. He has recently assumed responsibility for coordinating physical design efforts for the Voiceband Interface Frame portion of the No. 4 ESS project.

JAMES W. GORMAN, B.S.M.E., 1958, University of Maine; Western Electric Company, 1958—. Mr. Gorman has worked in Machine Design, Tantalum and Mica Capacitor Engineering, D2 Channel Bank Development and Product Engineering, and is now Lead Engineer for D1B Channel Bank Network and Channel Unit Product Engineering.

HANSJUERGEN H. HENNING, B.E.E., 1955, Polytechnic Institute of Brooklyn; M.E.E., 1961, New York University; Bell Laboratories, 1955—. Mr. Henning has been engaged in the design of PCM transmission systems, including the D1 and D2 Channel Banks, and experimental high-speed transmission systems. He also was engaged in circuit design for the *Telstar*[®] experimental satellite. Since 1970, he has been a member of the Ocean Systems Technology Laboratory where he was responsible for a group concerned with the design of hardware

for digital processing and display. He is presently engaged in the design of digital transmission systems for underwater applications. Member, Sigma Xi.

ROBERT H. KRAMBECK, B.E., 1965, City College of New York; M.S.E.E., 1966, and Ph.D., 1969, Carnegie-Mellon University; Bell Laboratories, 1968—. Mr. Krambeck has been engaged in the analysis and development of new types of memory elements. Member, IEEE.

COLLIER LEE MADDOX, B.S.E.E., 1959, Illinois Institute of Technology; M.E.E., 1961, New York University; Bell Laboratories 1959—. Since joining Bell Laboratories, Mr. Maddox has been concerned with the development of terminals for PCM systems. Member IEEE, Tau Beta Pi, Eta Kappa Nu.

DIETRICH MARCUSE, Diplom Vorpruefung, 1952, Dipl. Phys., 1954, Berlin Free University; D.E.E., 1962, Technische Hochschule, Karlsruhe, Germany; Siemens and Halske (Germany), 1954-57; Bell Laboratories, 1957—. At Siemens and Halske, Mr. Marcuse was engaged in transmission research, studying coaxial cable and circular waveguide transmission. At Bell Laboratories, he has been engaged in studies of circular electric waveguides and work on gaseous masers. He spent one year (1966-1967) on leave of absence from Bell Laboratories at the University of Utah. He is presently working on the transmission aspect of a light communications system. Mr. Marcuse is the author of two books. Member, IEEE, Optical Society of America.

L. D. MCDANIEL, B.S.E.E., 1964, Southern Methodist University; M.S.E.E., 1967, Polytechnic Institute of Brooklyn; Mohil Field Research Laboratory, 1960-64; Bell Laboratories 1965—. Before joining Bell Laboratories, Mr. McDaniel was engaged in designing and fabricating electronic equipment for usage in sonic and nuclear well logging tools. Since joining Bell Laboratories, he has been concerned with design and development of analog-to-digital and digital-to-analog converters for PCM Channel Banks. Member, Sigma Tau, Eta Kappa Nu.

JOHN W. PAN, B.S. (E.E.), 1955, University of Cincinnati; Sc.D. (E.E.), 1962, Massachusetts Institute of Technology; Bell Laboratories 1955—. Mr. Pan received a fellowship for study at MIT, 1958-1962. His early work at Bell Laboratories was concerned with the process of pulse code modulation and digital transmission. Since 1964, he has been responsible for a group that is engaged in design and analysis of digital transmission systems. Member, Eta Kappa Nu, IEEE, Sigma Xi, Tau Beta Pi.

KENNETH A. PICKAR, B.S. (Physics), 1961, Queens College of C.U.N.Y.; M.S., 1963, and Ph.D. (Physics), 1966, University of Pennsylvania; Bell Laboratories 1966—. Mr. Pickar has worked in radiation damage effects and device technology using ion implantation. More recently he has been studying electron beam lithography. During the academic year 1972-73, he is on leave from Bell Laboratories to teach at the Technion-Israel Institute of Technology.

SUKETU R. SHAH, B.Sc., 1961, Gujrat University, Ahmedabad, India; M.E. (E.E.), 1971, Stevens Institute of Technology; Bell Laboratories, 1967—. Mr. Shah is a member of the Radio Research Laboratory. Since joining Bell Laboratories, he has worked on thin-film solid-state devices and thin-film circuits at microwave and millimeter-wave frequencies. He is presently engaged in work on microwave integrated circuits for use in short-haul terrestrial communication systems.

DAVID J. VANSLOOTEN, B.S.E.E., 1949, Newark College of Engineering; Bell Laboratories, 1937—. Mr. VanSlooten's early work was in drafting, technical writing, and trial installation areas. His numerous physical design projects include various military projects, the *Telstar*[®] satellite, Sub-cable Test Set, and D2. His present assignment is the Voiceband Interface Frame of the No. 4 ESS. Member, Tau Beta Pi.

G. FOLKE SWANSON, I.M.E., 1932, Pratt Institute of Technology; attended Brooklyn Polytechnic Institute for E.E.; Bell Laboratories, 1937—. Mr. Swanson has been involved in the physical design of military radars, Nike-Zeus ABM, Unicom, and No. 1 ESS ADF Data

Switching System. Since 1966, he has been a member of the Physical Design Department of the Electronic Power Systems Laboratory. He has worked on physical design of carrier, microwave, military submarine cable power plant, and key telephone power supplies.

DENNIS K. THOVSON, B.S., 1960, M.S., 1961, Iowa State University; Bell Laboratories, 1961—. Mr. Thovson worked on the final development of the command circuitry for the *Telstar*® project, and did exploratory development work on logic circuitry for an experimental 224-Mb/s PCM system. More recently he has been engaged in the design of the digital circuitry and channel units for the D2 Channel Bank. Member, IEEE, Phi Kappa Phi.

R. H. WALDEN, B.E.S., 1962, M.E.E., 1963, and Ph.D., 1966, New York University; Bell Laboratories, 1966—. Mr. Walden's initial activities in the Semiconductor Device Laboratory were concerned with switching properties of VO_2 , followed by work on the conduction properties of Al_2O_3 films. For the last two years he has been involved in a study of the properties of charge transfer devices. Member, IEEE.

